

Evaluation of Etiology and Management Options of Epistaxis in Allied Hospital Faisalabad

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ABSTRACT

Objective: To determine the evaluation of etiology and management options of epistaxis in patients presenting to ENT ward Allied Hospital Faisalabad. **Study Design:** Cross-sectional study. **Place and Duration of Study:** Allied Hospital Faisalabad from July 2012 to December 2012. **Methodology:** Sixty patients of both sexes between the ages of 15-80 undergone this study. Detailed history taken and complete ENT examination done in all cases. Regular blood pressure monitoring done in all the patients. All the patients were fully investigated. Management included first aid measures (nose-pinching, ice-sponging, cold-saline gargles), anterior nasal packing, posterior nasal packing, and chemical cautery using silver nitrate. **Results:** In this study epistaxis was caused by hypertension in

27 cases (45%). In 15 patients (25%), the cause was trauma. Anatomic lesions caused epistaxis in 6 cases (10%). Chronic liver disease and pregnancy complications result in epistaxis in 3 cases (5%) each. While in 6 cases (10%), no cause was found. Patients were managed successfully with non-surgical methods (first aid measures, anterior nasal packing, posterior nasal packing, chemical cautery). Anterior nasal packing was done in 45 % cases (the most effective). **Conclusion:** From the study, it is concluded that the commonest cause of epistaxis in this region of the Punjab is hypertension (45% of cases) and the most effective treatment option for epistaxis is anterior nasal packing (45% of cases). **Key words:** Etiology, Management, Epistaxis.

INTRODUCTION

Epistaxis is one of the common presentations to an ENT surgeon¹. Epistaxis is estimated to occur in 60% of persons worldwide during their lifetime and approximately 6% of those with nosebleeds seek medical treatment^{2,3,4}. Patients at any age can present with epistaxis. There is a bimodal age distribution with peaks first in children and the second in adults (45-65)⁵. Epistaxis may present as an emergency, as a chronic problem of recurrent bleeds, or may be a symptom of generalized disorder. It not only affects the hemodynamic

status of the patient but also causes great anxiety to the patients and their relatives. Generally males are affected slightly more than females⁶ until 50 but after 50, there is no difference between sexes⁴. Epistaxis is commonly divided into anterior and posterior depending on the site of origin. In the majority of them, the bleeding is from kiesselbach's plexus⁷ on the lower portion of anterior nasal septum, known as the little's area whereas posterior nosebleeds arise from damage to the posterior nasal septal artery⁴. Anterior epistaxis is far more common than posterior epistaxis accounting for more than 80% of cases⁴. The etiology of epistaxis can be divided into local or systemic causes, this distinction is difficult to make and the term idiopathic epistaxis is used in 80-90% of the cases. The etiology varies with age and anatomical location⁴. Traumatic epistaxis is more common in younger individuals (under age 35)

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and can be caused by ; facial injury, digital trauma, or foreign body in the nasal cavity⁸. Non traumatic epistaxis is more common in older individuals (over age 50) and may be due to organ failure, neoplastic conditions, inflammations, environmental factors (temperature, humidity, altitude)⁸. Epistaxis after age 50 is mostly posterior epistaxis and more severe. Treatment is methodical according to the cause, location and severity of hemorrhage. Both conservative and surgical modalities can be used in the treatment of epistaxis⁴. Anterior epistaxis is easier to treat than posterior. Most of the underlying causes are preventable⁹. This study will provide the basis for planning of preventive measures and establishment of treatment guidelines.

METHODOLOGY

The study was a cross-sectional type of patients presented with nosebleeds (epistaxis) at Allied Hospital Faisalabad over a period of six months from July 2012 to December 2012. The study subjects included all patients who presented with epistaxis. These patients were received from accident and emergency department , ENT clinic and as referred from other departments. Patients died before initial assessment and those unwilling for consent were excluded from the study. Initial assessment included haemodynamic status, type and severity of bleeding. History was taken after the bleeding was controlled. Those suspected to be suffering from shock were resuscitated with control of epistaxis. Resuscitation was carried out according to the ATLS principles. All patients underwent detailed history and full systemic examination and also examination of ear, nose and throat with special emphasis to identify the site of bleeding. The patients undergone radiological and hematological investigations. Blood samples were taken for complete blood count, LFT's, RFT's , PT/APTT, BT/CT. Conservative treatment applied first and then used surgical treatment if initial steps failed. Immediately on receiving the patients BP checked, prophylactic antibiotics started in all patients. All of the patients were given inj. transamine 500mgtds. First aid measure adopted first: pinching the nose for 5 minutes (Hippocratic method), ice-pack sponging, cold saline gargles. Then other

procedures done. Anterior nasal packing, posterior nasal packing, chemical cautery. Surgical treatment included resection of intranasal tumors, arterial ligation. They were not needed. Endovascular ligation was not performed as it was not needed. The data was collected using a pre-tested structured proforma for the purpose.

Data collected included patients' demographics, cause of epistaxis, anatomical location of bleeding sites, management modalities, need for blood transfusion, mortality. The data collected were entered in SPSS version 10 for analysis. In descriptive analysis, the mean and standard deviation of continuous variables and percentages of categorical variables were computed.

RESULTS

A total of sixty patients were included in the study over a period of six months. Forty-two patients (70 %) were males. Eighteen patients (30 %) were females. The male to female ratio was 7:3. The age of the patients ranged from 15-80 years with mean age of 40.75 ± 18.05 years. Epistaxis was bilateral in 18 (30%) cases and was unilateral in 42 (70%) cases. In 24 cases (40%) epistaxis was left sided. Blood had been transfused to 12 patients (20%). According to the site, 54 cases (90%) had anterior nasal bleeding while 6 cases (10%) had posterior epistaxis. In this study the commonest cause of epistaxis was hypertension (27 cases, 45%). The second commonest cause was trauma which caused epistaxis in 15 cases (25%). Anatomic lesions caused epistaxis in 6 cases (10%). They were caused by nasal polypi and deviated nasal septum. In 3 cases (5%) epistaxis was complicated by pregnancy. In 6 cases (10%) cases no cause was found despite full investigations. In these patients the cause was idiopathic. 15 cases (25%) were HCV+ in addition to some other cause. Non-surgical interventions were the mainstay treatment in almost all of the patients. Anterior nasal packing was the most effective means for stopping the epistaxis in majority of the cases (27 case, 45%) while in 35% of the cases (21), first aid measures only were effective in managing the patients and there was no need of any other procedure to be done. Posterior packing was needed and done in 9 cases

(15%) while 3 cases (5%) undergone chemical cautery with silver nitrate as there was a clear bleeding point on the anterior aspect of septum and was not relieved with nasal packing. Arterial ligation or endovascular embolization was not required in any case.

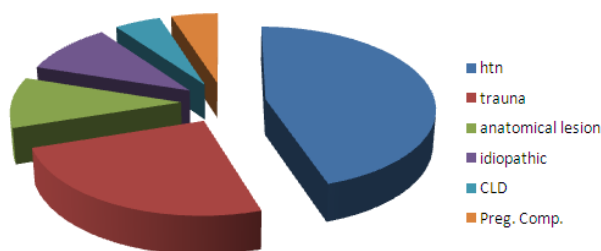
Table-1

Management options of epistaxis

Treatment options	No. of cases managed	%age
First aid measure	21 cases	35%
Anterior nasal packing	27 cases	45%
Posterior nasal packing	9 cases	15%
Chemical cautery	3 cases	5%

Figure-1

Etiology of Epistaxis



DISCUSSION

In this study, epistaxis was found to be more prevalent in 40-80 years of age groups. In our study, epistaxis was found to affect males more than females, with a male to female ratio of 7:3. The male preponderance has been documented in literature⁶. Young males are more active in society and therefore are more prone to trauma from fights and accidents while children become victim to epistaxis mostly because of digital trauma. The commonest cause of epistaxis in this study was Hypertension. In developing countries, the commonest causes are idiopathic and hypertension^{10,11}. In developed countries the commonest cause is idiopathic followed by trauma¹². In our study idiopathic was next to trauma.

There is a need of regular blood pressure check-ups with regular use of anti-hypertensive treatment. The management of epistaxis is well summarised in an age-old dictum: resuscitate the patient, establish the bleeding site, stop the bleeding and treat the cause¹³. All those persons who are to deal with epistaxis should wear a face mask, gowns hair-coverage and double gloving the hands. Treatment can be surgical or non-surgical. Non-surgical approach had been used in 80-90 % of cases¹⁴. A 2010 study by Gracia et al determined that gauze packing, despite being slower and more uncomfortable, has a higher success rate, produces fewer local injuries, and costs less than inflatable balloon packing¹⁵. Anterior nasal packing had been the most effective management measure in this study. Anterior packing has been used in 27 (45%) cases. Posterior nasal packing had to be done in 9 patients (15%). The cause of epistaxis in them was hypertension. Barlow et al found the need of surgical management in posterior epistaxis¹⁶. Urvashi et al reported successful use of anterior nasal packing in 92.5% of cases¹⁷. Nasal packing can be done within the ward premises. There is no need of anesthesia. It is less painful and easy to remove. Complications can be re-bleeding due to mucosal injury, sinusitis, toxic shock syndrome.

Cautery can be applied via: chemical cautery, Electro-cautery or Laser. Chemical cautery was used in 3 patients (5%) with good success. Chemical cautery can be applied using a silver nitrate stick directly to the bleeding site for approximately 30 seconds¹⁸. Post-cautery septal perforation or cartilage necrosis was not observed. In this study surgical treatment was not done in any case. Arterial ligation and embolization is the last resort to epistaxis and were not needed. Blood transfusion was needed in 12 (20 %) cases. The use of antimicrobial prophylaxis has been used in all of the cases, however their role in nasal packing remains controversial¹³. Suturing of bleeding vessel in Little's area is an option in refractory anterior epistaxis¹⁹. It was not needed in our study in any case as stated by Ismail et al²⁰. The mean length of stay was 4 days. Stay was longer for those having posterior nasal packing. Mortality is rare and is associated with

hypovolemia due to severe blood loss. Mortality rate was zero as no patient died due to epistaxis during the study period.

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